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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-2202E
Plant ID No.:	099-00036
Applicant:	Kanawha River Terminals, LLC
Facility Name:	Ceredo Dock - Coal Facility
Location:	Ceredo, Wayne County, WV
SIC Code:	1221 (Bituminous Coal & Lignite - Surface)
Application Type:	Modification
Received Date:	8/28/09
Engineer Assigned:	Dan Roberts
Fee Amount:	$2,000
Date Received:	9/1/09
Complete Date:	4/9/10
Applicant's Ad Date:	9/1/09
Newspaper:	*Wayne County News*
UTM's:	Easting: 363.9 km Northing: 4,250.9 km Zone: 17
Description:	The purpose of this modification application is as follows: delete previously permitted, but not constructed, belt conveyors BC-02, BC-03, BC-27 and BC-28 and coal silos BS-03, BS-04 and BS-05; Add a bin, two conveyors, a crusher and an open stockpile from the dismantled Synfuel Plant No. 1 previously permitted under R13-2366B as BS-12, BC-30 and BC-31, CR-01 and OS-15, respectively, and increase their maximum throughputs from 800 TPH and 6,132,000 TPY to 1,000 TPH and 8,760,000 TPY; change the inputs for the calculation of emissions from paved haulroads for the trucking of miscellaneous materials and loaders working stockpiles; increase the maximum hourly throughput for the existing small miscellaneous materials barge off-load from 114 TPH to 500 TPH; construct six additional belt conveyors BC-32 thru BC-37 and an additional clean coal and miscellaneous materials stockpile area OS-14 to be located adjacent to the existing barge off-load system; decrease the maximum throughputs of transfer point TP-22 from 1,400 TPH and 12,264,000 TPY to 700 TPH and 6,132,000 TPY; and decrease the maximum throughputs of transfer points TP-23, TP-24 and TP-25 from 1,500 TPH and 12,264,000 TPY to 700 TPH and 6,132,000 TPY.

BACKGROUND

Kanawha River Terminals, LLC ("KRT") proposes to modify their existing coal preparation plant and loadout facility located in Ceredo, Wayne County, WV. Permit R13-2202E will supercede and replace Permit R13-2202D approved on April 10, 2006.

In application R13-2202E, KRT proposes to delete previously permitted, but not constructed, belt conveyors BC-02 and BC-03 and coal silos BS-03 and BS-04, which had been proposed to transfer coal from the railcar rotary dumps to be stored in the silos and then back to existing conveyor BC-04. KRT has also proposed to delete previously permitted, but not constructed, reversing belt conveyors BC-27 and BC-28 and coal silo BS-05, which had been proposed to transfer coal from another railcar rotary dump BS-05 to a barge loadout or to existing conveyor BC-11.

Additionally, KRT proposes to construct six additional belt conveyors BC-32 thru BC-37 and an additional clean coal and miscellaneous materials stockpile area OS-14 to be located adjacent to the existing barge off-load system.

KRT also submitted a Class I administrative update application number R13-2366C for their Ceredo Dock - Synfuel Plants facility with proposed changes to existing permit R13-2366B on September 3, 2009. This application requests to modify their existing permit by deleting all of the equipment associated with Synfuel Plant No. 1, which has been disassembled and removed from the property. Hoever, in application R13-2202E, KRT proposes to add a bin, two conveyors, a crusher and an open stockpile from the dismantled Synfuel Plant No. 1 previously permitted under R13-2366B as BS-12, BC-30 and BC-31, CR-01 and OS-15, respectively, and increase their maximum throughputs from 800 TPH and 6,132,000 TPY to 1,000 TPH and 8,760,000 TPY.

KRT's existing Ceredo Dock facility currently consists of a coal preparation plant and loadout facility (R13-2202D), two (2) coal-based synfuel production plants (R13-2366B), and a binder production plant and tank farm (R13-2377B) at their Ceredo Dock.

KRT was issued permit R13-2202 on December 15, 1998 for the modification of their existing coal handling facility by reconfiguring the currently permitted conveyor system and adding another storage area. Additions to the facility included two more rotary dumps, four 10,000 ton silos, the capability to receive and ship various miscellaneous materials, and another barge load in/out. Permit R13-2202 superceded and replaced permit R13-1890A.

KRT was issued permit R13-2202A on December 5, 2002 for a modification permit to identify existing and proposed equipment, establish two 800 TPH screening facilities instead of one 1,000 TPH facility, increase the maximum operating rates and anuual throughputs, storage capacity, and delivery of coal fines to and coal-based synfuel product from the Ceredo Dock facility. Permit R13-2202A superceded and replaced permit R13-2202.

KRT was issued permit R13-2202B on January 6, 2004 for a Class II administrative update permit to delete previously proposed stacking tubes OS-10, OS-11, and OS-12 along with

belt conveyors BC-15, BC-16, BC-17, and BC-18 and their transfer points; increase the capacity of stockpile OS-13 from 5,000 tons to 25,000 tons; delete stockpiles OS-16, OS-17, OS-18, and OS-19 and designate the area south of stacking tube OS-9 as coal stockpile area OS-10 with 175,000 tons of storage. Permit R13-2202B superceded and replaced permit R13-2202A.

KRT submitted modification application R13-2202C on July 30, 2004 to increase the throughput for the barge off-loading facility and decrease throughput for trucks received and proposed railcar dump #3. KRT requested the application to be placed on hold on March 11, 2005. KRT withdrew application R13-2202C on June 29, 2005.

KRT was issued permit R13-2202D on April 10, 2006 for a modification permit to construct and operate a barge off-load and batch weight rail loadout system as well as maximize the annual throughput for the existing equipment. Synfuel Plant #3 was removed from the permit because it was relocated to Shrewsbury, WV (R13-2530X, 039-00538). Permit R13-2202D superceded and replaced permit R13-2202B.

DESCRIPTION OF PROCESS

Clean coal/coal-based synfuel will be delivered to/shipped from the Ceredo Dock by barge, railcar and 18-wheel trucks. Although coal-based synfuel is not presently manufactured at this facility, Synfuel Plant #2 still exists on the property and is mentioned in various transfers.

Railcars transfer at 2700TPH to a fully-enclosed rotary dump bin BS-01(FW) @ TP02(UL-FW); BS-01 transfers to a fully enclosed belt conveyor BC-01(FW) @ TP-03(LO-FW); BC-01 transfers to a partially-enclosed belt conveyor BC-04 @ TP-03a(TC-FE). Railcars discharge at 2700TPH to a fully enclosed rotary dump bin BS-02(FW) @ TP-10(UL-FW); BS-02 transfers to a partially-enclosed belt conveyor BC-04(PE) @ TP-11(LO-FW). BC-04 transfers to either barge @ TP-70(LO-TC) or to a 4800TPH reversing conveyor BC-05(PE) @ TP-12(TC-FE). Partially-enclosed BC-05(PE) transfers to BC-08(PE) @ TP-13(TC-FE) which transfers to a series of partially-enclosed stockpile feed conveyors BC-09(PE), BC-010(PE), BC-11(PE), BC-12(PE), BC-13(PE), BC-14(PE), BC-15(PE), BC-16(PE) @ TP-14(TC-FE) thru TP-40(TC-FE) at 4800 tons per hour. Material can also be received by barge and transferred by excavators @ TP-41(UD-MDH) and TP-44(UD-MDH) to partially enclosed bin BS-08(PE) and BS-09(PE). The bins discharge to a series of partially enclosed 1000TPH belt conveyors BC-17(PE) thru BC-22(PE) @ TP-42(TC-FE) thru TP-50(TC-MDH). KRT proposes to take coal from Bin BS-08 and transfer it to a new coal storage area OS-14(SW-WS) via a series of partially enclosed belt conveyors BC-32(PE) thru BC-35(PE) @ TP-82(TC-FE) thru TP-86(TC-MDH). Belt conveyors BC-36(PE) and BC-37(PE) will reclaim the coal underpile and transfer it back to the existing belt BC-20 @ TP-87(LO-UC) thru TP-89(TC-FE).

The existing barge off-load consists two feed hoppers BS-08 and BS-09 and their associated conveyors. However, feed hopper BS-09 and belt conveyors BC-18 and BC-19 were permitted in 2006, but have not been constructed. Existing bin BS-08 will transfer 8,760,000 tons of coal and miscellaneous materials per year to the new OS-14 stockpile area over conveyors BC-32 through BC-35. Of the 8,760,000 tons per year that may be processed, only 4,380,000

tons of miscellaneous material per year may be processed. Stockpile area designated as OS-14 can store a maximum of 500,000 tons of coal and miscellaneous materials, but will be limited in the amount of coke, coke breeze, and magnetite that can be stored in this area. The maximum facility-wide storage of coke, coke breeze, or magnetite for OS-14, OS-12 and OS-13 combined at any given time will be 50,000 tons. The coal and miscellaneous materials will be reclaimed from stockpile area OS-14 and loaded to new dump hopper BS-13, which will drop them to conveyor BC-36 and then BC-37 which transport them back to existing conveyor BC-20.

On April 7, 2010, the writer spoke with Al Carducci of the DAQ's Northern Panhandle Regional Office regarding his experiences with the open stockpiling of coke and coke breeze. Mr. Carducci regularly inspects a coking plant and a screening and storage facility in Brooke County in the northern panhandle of West Virginia. Coke is a solid carbonaceous residue obtained from bituminous coal after removal of volatile material by destructive distillation in coke ovens. The coke is then screened and coke breeze is the fine material that is left over and it is still a viable product. Coke and coke breeze are used as a fuel in the making of steel. Mr. Carducci explained that he required them to water the coke and coke breeze open stockpiles if they observed visible emissions, but that typically there has not been a problem with open storage.

The writer also spoke with Eric Ray of the DAQ's Compliance and Enforcement Section regarding the open stockpiling of magnetite. Mr. Ray stated that he has inspected facilities which store magnetite in open stockpiles and he hasn't found a problem with it. Mr. Ray had pictures of an open stockpile storing magnetite from a previous site inspection.

Belt conveyor BC-25(PE) @ TP-22(LO-MDH) transfers material from the existing stockpiles located at synfuel plant #2 and stockpile OS-15(SW-WS) to partially-enclosed belt conveyor BC-26(PE) @ TP-23(TC-FE); BC-26 transfers material to the conveyor system for stockpile feed and material loadout systems @ TP-24(TC-FE).

Trucks will load-in and load-out from stockpiles OS-11 thru OS-10, respectively, @ TP-01(UL-MDH) and TP-71(LO-MDH). Material stored in OS-10 can pushed to the loadout stockpile system via dozer @ TP-51(LO-MDH). Fugitive emissions will be controlled by water truck and a truck wheel wash located on the road exiting the dock property to minimize tracking onto the adjacent highway.

Stockpiles OS-01 thru OS-09 discharge to underground conveyor BC-23(FE) @ TP-52(LO-UC) thru TP-60(LO-UC). Coal and coal-based synfuel can transfer out of the facility from BC-23 @ TP-61(TC-FE) to the proposed batch weight rail loadout facility via belt BC-06(PE) and BC-07(PE) @ TP-62(TC-FE) and TP-63(TC-FE). These belts feed the surge bin BS-06(FE) and loadout bin BS-07(FE) and onto rail @ TP-64(TC-FE) and TP-65(LR-TC). BC-23 can transfer to a 4800TPH 60" loadout conveyor BC-24(PE) to barge via telescopic chute @ TP-67(LO-TC) or to reversing conveyor BC-05. BC-05 transfers to 4800TPH loadout conveyor BC-04 @ TP-69(TC-FE) to barge via telescopic chute @ TP-70(LO-TC).

An additional small barge facility is located on the west-end of the dock property for the transfer and storage of miscellaneous materials. Materials are off-loaded by excavator to

BS-10(PE); to conveyor BC-29(PE); BC-29 to BS-11(PE); to truck for delivery @ TP-72(UD-MDH) thru TP-76(LO-MDH). The maximum hourly throughput has been increased from 114 TPH to 500TPH.

Synfuel Plant No. 1 has been demolished and removed from the property. The existing coal processing equipment, consisting of one bin BS-12, one crusher CR-01, and two belt conveyors BC-30 and BC31 have been included in this modification application. They are depicted in TP-77(UD-PW) thru TP-81(TC-MDH). The previously designated coal-based synfuel stockpile has also been included and identified as clean coal stockpile OS-15(SW-WS).

Coal, coal products or coal-based synfuel may be stored at or processed through any or all of the stockpile and stacking tube areas to allow for contractual obligations and operational flexibility.

All transfer points are at least fully-enclosed or partially-enclosed with water sprays. Emissions from stockpiles loading onto OS-01 thru OS-09 are controlled by the use of stacking tubes. Water sprays are available for use as needed during the load-in process.

There are no VOC's or hazardous air pollutants associated with the coal or coal-based synfuel process.

The facility shall be modified and operated in accordance with the following equipment and control device information taken from permit applications R13-2202E, R13-2202D, R13-2202B, R13-2202A and R13-2202 and any amendments thereto:

Equipment ID #	Date of Construction, Re-Construction or Modification	Emission Unit Description	Design Capacity		Control Device(s)[1]
			TPH	TPY	
Coal Circuit - From Railcars to Storage to Barges or Railcars					
BS-01	1997	Railcar Rotary Dump - 140 tons - receives coal from railcars and it is dropped to BC-01	2,700	18,396,000	FW
BC-01	1997	Belt Conveyor - receives coal from BS-01 and transfers it to BC-04	2,700	18,396,000	PE
BS-02	1997	Railcar Rotary Dump - 140 tons - receives coal from railcars and it is dropped to BC-04	2,700	18,396,000	FW
BC-04	1997	Belt Conveyor - receives coal from BC-01, BS-02 and BC-05 and transfers it to the barge loadout through a telescopic chute or to BC-05	4,800	18,396,000	PE
BC-05	1997	Reversing Belt Conveyor - receives coal from BC-04 and BC-23 (see below) and transfers it to the barge loadout through a telescopic chute or to BC-08	4,800	18,396,000	PE
BC-08	1997	Belt Conveyor - receives coal from BC-05 and transfers it to OS-1 or BC-09	4,800	18,396,000	PE
OS-1	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-08 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-09	1997	Belt Conveyor - receives coal from BC-08 and transfers it to OS-2 or BC-10	4,800	18,396,000	PE

Equipment ID #	Date of Construction, Re-Construction or Modification	Emission Unit Description	Design Capacity		Control Device(s)[1]
			TPH	TPY	
OS-2	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-09 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-10	1997	Belt Conveyor - receives coal from BC-09 and transfers it to OS-3 or BC-11	4,800	18,396,000	PE
OS-3	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-10 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-11	1997	Belt Conveyor - receives coal from BC-10 and transfers it to OS-4 or BC-12	4,800	18,396,000	PE
OS-4	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-11 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-12	2002	Belt Conveyor - receives coal from BC-11 and transfers it to OS-5 or BC-13	4,800	18,396,000	PE
OS-5	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-12 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-13	2002	Belt Conveyor - receives coal from BC-12 and transfers it to OS-6 or BC-14	4,800	18,396,000	PE
OS-6	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-13 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-14	2002	Belt Conveyor - receives coal from BC-13 and transfers it to OS-7 or BC-15	4,800	18,396,000	PE
OS-7	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-14 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-15	2002	Belt Conveyor - receives coal from BC-14 and transfers it to OS-8 or BC-16	4,800	18,396,000	PE
OS-8	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-15 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-16	2002	Belt Conveyor - receives coal from BC-15 and transfers it to OS-9	4,800	18,396,000	PE
OS-9	1997	Coal Open Stockpile with Stacking Tube - 25,000 tons - receives coal from BC-16 and it is reclaimed by underground feeders to BC-23	4,800	18,396,000	WS
BC-23	2004	Belt Conveyor - receives coal from OS-1, OS-2, OS-3, OS-4, OS-5, OS-6, OS-7, OS-8 and OS-9 and transfers it to BC-05 (see above), BC-24 (see above) or BC-06	4,800	18,396,000	FE
BC-06	Not Constructed	Belt Conveyor - receives coal from BC-23 and transfers it to BC-07	4,800	18,396,000	FE
BC-07	Not Constructed	Belt Conveyor - receives coal BC-06 and transfers it to BS-06	4,800	18,396,000	FE
BS-06	Not Constructed	Coal Railcar Surge Bin - 400 tons - receives coal from BC-07, stores it temporarily and then drops it to BS-07	4,800	18,396,000	FE
BS-07	Not Constructed	Coal Railcar Loadout Bin - 120 tons - receives coal from BS-06 and loads it to railcars	4,800	18,396,000	FE
Coal and Miscellaneous Materials Circuit [3] - From Barges to Storage					

Equipment ID #	Date of Construction, Re-Construction or Modification	Emission Unit Description	Design Capacity		Control Device(s)[1]
			TPH	TPY	
BS-08	2006	Coal Top-Fed Barge Off-Load Bin - 100 tons - receives coal and miscellaneous materials from barges via excavators and drops it to BC-32 or BC-17	1,000	8,760,000	PE
BC-32	C - 2010	Belt Conveyor - receives coal and miscellaneous materials from BS-08 and transfers it to BC-33	1,000	8,760,000	PE
BC-33	C - 2010	Belt Conveyor - receives coal and miscellaneous materials from BC-32 and transfers it to BC-34	1,000	8,760,000	PE
BC-34	C - 2010	Belt Conveyor - receives coal and miscellaneous materials from BC-33 and transfers it to BC-35	1,000	8,760,000	PE
BC-35	C - 2010	Belt Conveyor - receives coal and miscellaneous materials from BC-34 and transfers it to OS-14	1,000	8,760,000	PE
OS-14	C - 2010	Coal and Miscellaneous Materials Open Stockpile Area - 500,000 tons - receives coal and miscellaneous materials from BC-35 and it is reclaimed by an endloader to BS-13. The maximum combined annual throughput for the miscellaneous materials is 4,380,000 TPY. The maximum facility-wide storage limit for coke, coke breeze and magnetite combined at any given time is 50,000 tons.	1,000	8,760,000 combined 4,380,000 misc. materials	WS
BS-13	C-2010	Coal Top-Fed Bin - 100 tons - receives coal and miscellaneous materials from endloaders and drops it to BC-36	1,000	8,760,000	PE, WS
BC-36	C - 2010	Belt Conveyor - receives coal and miscellaneous materials from BS-13 and transfers it to BC-37	1,000	8,760,000	PE
BC-37	C - 2010	Belt Conveyor - receives coal and miscellaneous materials from BC-36 and transfers it to BC-20 (see below)	1,000	8,760,000	PE
BC-17	2005	Belt Conveyor - receives coal and miscellaneous materials from BS-08 (see above) and transfers it to BC-20 (see below)	1,000	8,760,000	PE
BS-09	Not Constructed	Coal Top-Fed Barge Off-Load Bin - 100 tons - receives coal and miscellaneous materials from barges via excavators and drops it to BC-18	1,000	8,760,000	PE
BC-18	Not Constructed	Belt Conveyor - receives coal and miscellaneous materials from BS-09 and transfers it to BC-19	1,000	8,760,000	PE
BC-19	Not Constructed	Belt Conveyor - receives coal and miscellaneous materials from BC-18 and transfers it to BC-20	1,000	8,760,000	PE
BC-20	2005	Belt Conveyor - receives coal and miscellaneous materials from BC-19 and coal and miscellaneous materials from BC-17 (see above) and BC-37 (see above) and transfers it to BC-21	1,000	8,760,000	PE
BC-21	1998	Belt Conveyor - receives coal and miscellaneous materials from BC-20 and transfers it to BC-22	1,000	8,760,000	PE
BC-22	1998	Belt Conveyor - receives coal and miscellaneous materials from BC-22 and transfers it to OS-10	1,000	8,760,000	PE
OS-10	2004	Coal Open Stockpile - 175,000 tons - receives coal and miscellaneous materials from BC-22 and it is reclaimed by an endloader to trucks for shipment	-----	18,396,000	WS
Coal Crushing Circuit					
OS-11	2000	Coal Open Stockpile - 25,000 tons - receives coal from trucks and it is reclaimed by an endloader to BS-12 (previously permitted under Synfuel Plant No. 1 in R13-2366B)	114 in	12,264,000	WS

Equipment ID #	Date of Construction, Re-Construction or Modification	Emission Unit Description	Design Capacity		Control Device(s)[1]
			TPH	TPY	
BS-12	M - 2010 2000	Coal Top-Fed Bin - 60 tons - receives coal from endloaders and drops it to BC-30 (previously permitted under Synfuel Plant No. 1 in R13-2366B) (2010 - Increase the maximum throughputs from 800 TPH and 6,132,000 TPY to 1,000 TPH and 8,760,000 TPY)	1,000	8,760,000	PE
BC-30	M - 2010 2002	Belt Conveyor - receives coal from BS-12 and transfers it to BC-31 (previously permitted under Synfuel Plant No. 1 in R13-2366B) (2010 - Increase the maximum throughputs from 800 TPH and 6,132,000 TPY to 1,000 TPH and 8,760,000 TPY)	1,000	8,760,000	PE
CR-01	M - 2010 2000	Jeffrey Double Roll Crusher - receives coal from BC-30, crushes it and then drops it to BC-31 (previously permitted under Synfuel Plant No. 1 in R13-2366B) (2010 - Increase the maximum throughputs from 800 TPH and 6,132,000 TPY to 1,000 TPH and 8,760,000 TPY)	1,000	8,760,000	FW
BC-31	M - 2010 2002	Belt Conveyor - receives coal from BC-30 and transfers it to OS-15 (previously permitted under Synfuel Plant No. 1 in R13-2366B) (2010 - Increase the maximum throughputs from 800 TPH and 6,132,000 TPY to 1,000 TPH and 8,760,000 TPY)	1,000	8,760,000	PE
OS-15	M - 2010 2000	Coal Open Stockpile - 10,000 tons - receives coal from BC-31 and it is reclaimed by an endloader to BC-25 (previously permitted under Synfuel Plant No. 1 in R13-2366B) (2010 - Increase the maximum throughputs from 800 TPH and 6,132,000 TPY to 1,000 TPH and 8,760,000 TPY and capacity from 5,000 tons to 10,000 tons)	1,000 in 700 out	8,760,000	WS
Coal-Based Synfuel Product Recovery Circuit					
BC-25	2002	Belt Conveyor - receives coal-based synfuel from coal-based synfuel stockpiles (permit R13-2366C) and coal from OS-15 via an endloader and transfers it to BC-26	1,500	8,760,000	PE
BC-26	2002	Belt Conveyor - receives coal-based synfuel from BC-25 and transfers it to BC-11 or OS-4 (see Coal Circuit - From Railcars to Storage to Barges or Railcars above)	1,500	8,760,000	PE
Small Miscellaneous Materials[3] Barge Off-load Circuit - From Barge to Storage to Trucks					
BS-10	M - 2010 2002	Miscellaneous Materials Barge Off-Load Bin - 20 tons - receives miscellaneous materials from barges via a crane and clamshell and drops it to BC-29 (2010 - Increase the maximum hourly throughput from 114 TPH to 500 TPH)	500	1,000,000	PE
BC-29	M- 2010 2002	Miscellaneous Materials Conveyor - receives miscellaneous materials from BS-10 and transfers it to BS-11 (2010 - Increase the maximum hourly throughput from 114 TPH to 500 TPH)	500	1,000,000	PE
BS-11	M - 2010 2002	Miscellaneous Materials Off-Load Transfer Bin - 80 tons - receives miscellaneous materials from BC-29 and loads them to trucks (2010 - Increase the maximum hourly throughput from 114 TPH to 500 TPH)	500	1,000,000	PE
OS-12	M - 2010 2002	Miscellaneous Materials Open Stockpile - 2,500 tons - receives miscellaneous materials from trucks, stores them and then a front endloader loads them back to trucks (2010 - Increase the maximum hourly throughput from 114 TPH to 500 TPH)	-----	1,000,000	WS

Equipment ID #	Date of Construction, Re-Construction or Modification	Emission Unit Description	Design Capacity		Control Device(s)[1]
			TPH	TPY	
OS-13	M - 2010 2002	Miscellaneous Materials Open Stockpile - 2,500 tons - receives miscellaneous materials from trucks, stores them and then a front endloader loads them back to trucks (2010 - Increase the maximum hourly throughput from 114 TPH to 500 TPH)	-----	1,000,000	WS

[1] In accordance with 40 CFR 60 Subpart Y, coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified on or before April 28, 2008 shall not discharge gases which exhibit 20 percent opacity or greater. Coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified after April 28, 2008 shall not discharge gases which exhibit 10 percent opacity or greater. For open storage piles constructed, reconstructed, or modified after May 27, 2009, the permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for site conditions.

[2] FE - Full Enclosure; PE - Partial Enclosure; ST - Stacking Tube; WS - Water Sprays; N - None.

[3] The miscellaneous materials permitted are sand, gravel, highway salt, coke, coke breeze, and magnetite.

DESCRIPTION OF FUGITIVE EMISSIONS

Potential sources of fugitive particulate matter emissions for this facility include emissions that are not captured by pollution control equipment and emissions from open stockpiles and vehicular traffic on paved haulroads and work areas. The haulroads, stockpiles and work areas will be controlled by fixed rainbird water sprays and by water truck. The water truck will be operated on a regular basis, depending on weather conditions and the operating schedule for the facility.

All belt conveyors are at least partially enclosed and equipment transfer points are fully enclosed. Water sprays are located at various transfer points throughout the facility to be used on an as needed basis.

A truck wash has been installed prior to the property exit to prevent the tracking of materials onto the adjacent highway.

An additive to prevent freezing will be utilized in the winter months when freezing conditions are present, but in keeping with MSHA Safety Standards.

SITE INSPECTION

The writer performed an announced site inspection on March 1, 2010 for modification application R13-2202E. The weather was approximately 40^{o}F and overcast. The contacts at the facility were Brad Tiller, EHS Coordinator for KRT, and Donna Toler, consultant from P & A Engineers and Associates, Inc. Mr. Tiller drove us around the facility for the inspection. The writer observed the proposed new storage area on the east end of the facility between the Ohio River and Twelvepole Creek. It is currently a hay field with trees surrounding the south side towards U.S. Route 60. There was no equipment on site and no grade work had been

performed.

Directions from Charleston: take I-64 West to Huntington, take Exit 1 for Kenova/Ceredo, turn right at the stop sign onto State Route 75 West and travel 0.7 miles, turn right at the light onto U.S. Route 60 East and travel 1.0 miles, turn left at the light onto Main Street and travel 0.1 miles. The office is on the right side near the intersection of Main and River Streets.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haulroads are based on AP-42 "Compilation of Air Pollution Emission Factors." Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The emission factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. The calculations were performed by the applicant and were checked for accuracy and completeness by the writer.

The proposed modifications will result in an increase in the potential to discharge controlled emissions of 9.74 pounds per hour and 49.20 TPY of particulate matter (PM), of which 3.16 pounds per hour and 16.93 TPY will be particulate matter less than 10 microns in diameter (PM_{10}). See the attached G10-C Excel spreadsheet for a summary of the change in emissions.

The proposed modification will result in the following new estimated potential to discharge controlled emissions:

New Emissions Summary - **Kanawha River Terminals, LLC R13-2202E**	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
		Fugitive Emissions		
Stockpile Emissions	2.56	11.21	1.20	5.27
Unpaved Haulroad Emissions	0.00	0.00	0.00	0.00
Paved Haulroad Emissions	15.91	69.69	3.10	13.58
Fugitive Emissions Total	*18.46*	*80.90*	*4.30*	*18.84*
		Point Source Emissions		
Equipment Emissions	2.00	8.76	0.94	4.12
Transfer Point Emissions	39.52	106.41	18.69	50.33
Point Source Emissions Total (PTE)	*41.52*	*115.17*	*19.63*	*54.45*
FACILITY EMISSIONS TOTAL	**59.98**	**196.07**	**23.93**	**73.29**

KRT's existing facility will consist of a coal preparation plant and loadout facility (R13-2202E), one (1) coal-based synfuel production plant (R13-2366C), and a binder production plant
and tank farm (R13-2377B) at their Ceredo Dock. A summary of the calculated emissions from KRT's existing operations and the proposed modifications are shown in the following summary:

Facility Emissions Summary - **Kanawha River Terminals, LLC Ceredo Dock**	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
			Fugitive Emissions	
R13-2202E - Coal Facility	18.46	80.90	4.30	18.84
R13-2366C - Synfuel Plant	0.12	0.53	0.06	0.25
R13-2377B - Binder Plant and Tank Farm	0.00	0.00	0.00	0.00
Fugitive Emissions Total	*18.58*	*81.43*	*4.36*	*19.09*
R13-2202D - Coal Facility	41.52	115.17	19.63	54.45
R13-2366C - Synfuel Plant	3.08	11.60	1.45	5.47
R13-2377B - Binder Plant and Tank Farm	0.103	0.214	0.103	0.214
Point Source Emissions Total	*44.70*	*126.98*	*21.18*	*60.13*
FACILITY EMISSIONS TOTAL	**63.28**	**208.41**	**25.54**	**79.22**

KRT's existing coal preparation plant and loadout facility (R13-2202E), one (1) coal-based synfuel production plant (R13-2366C), and binder production plant and tank farm (R13-2377B) meet the definition of "Building, Structure, Facility, or Installation" in 45CSR14.2.10 and "Major Source" in 45CSR30.2.26 and shall be considered as one facility for determining applicability to 45CSR14 (PSD) and 45CSR30 (Title V). Therefore, KRT's proposed modifications and their existing operations shall be combined when determining applicability. The operations will have a combined estimated potential to discharge controlled emissions of 208.41 TPY of particulate matter, of which 79.22 TPY will be particulate matter less than ten (10) microns in diameter. The facilities will have a combined estimated potential to emit (point source emissions only) of 126.98 TPY of particulate matter, of which 60.13 TPY will be particulate matter less than ten (10) microns in diameter.

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the modified facility. The proposed modification of KRT's coal preparation plant and loadout facility is subject to the following state and federal rules:

45CSR5 *To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas*

The facility is subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed are in operation.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed modification is subject to the requirements of 45CSR13 because it will result in an increase in potential controlled emissions greater than six (6) pounds per hour and ten (10) tons per year of a regulated air pollutant (PM) and involves the construction of equipment subject to NSPS Subpart Y. The applicant has submitted an application for a modification permit. The applicant published a Class I legal advertisement in the *Wayne County News* on September 1, 2009 and submitted $1,000 for the application fee and $1,000 for the NSPS fee.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart Y: Standards of Performance for Coal Preparation and Processing Plants

This facility is subject to 40 CFR 60 Subpart Y because it was constructed and will be modified after October 24, 1974 and will process more than 200 tons of coal per day. The proposed modification includes the addition of one bin, two conveyors, and one crusher previously permitted under permit R13-2366B; the construction of six new conveyors; and modification of existing equipment and stockpiles, which are defined as affected facilities in 40 CFR 60 Subpart Y. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants. The facility should be in compliance with Section 254(a) (less than 20% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified on or before April 28, 2008) and Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, the coal preparation plant and loadout facility, one coal-based synfuel production plant, and binder production facility and tank farm shall be considered as one facility and will be a non-major source which is subject to NSPS Subpart Y. The facility's combined potential to emit will be 60.13 TPY of a regulated air pollutant (PM_{10}) as defined in subsection 2.32, not including fugitive emissions from haulroads, which is less than the 45CSR30 threshold of 100 TPY. Therefore, the facility will continue to be subject to 45CSR30 and classified as a Title V

deferred non-major source.

The proposed modification of KRT's coal preparation plant and loadout facility is not subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, the coal preparation plant and loadout facility, one coal-based synfuel production plant, and binder production plant and tank farm shall be considered as one facility and is not one of the listed sources under the definition of "Major Stationary Source" in subsection 2.43. The facility will have the potential to emit 126.98 TPY of a regulated air pollutant (PM), not including fugitive emissions, which is less than the 45CSR14 threshold of 250 TPY. In accordance with subsection 2.4.3.d, this facility is not listed in Table 1, and so fugitive emissions are not included when determining source applicability. Therefore, the proposed modifications are not subject to the requirements set forth within 45CSR14.

45CSR19 Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants

This existing facility is located in Wayne County, WV, which currently has a status of non-attainment for $PM_{2.5}$ (particulate matter less than 2.5 microns in diameter). In accordance with Subsection 2.35.e, this facility is not a listed facility which must include fugitive emissions when determining if it is a major stationary source. This facility is an existing minor source with a potential to emit of less than 100 TPY for all regulated air pollutants, not including fugitive emissions, and the proposed increase in their potential to emit is less than 100 TPY, not including fugitive emissions. Therefore, the proposed modification does not trigger Major Non-Attainment NSR Review. This facility will continue to be a minor source.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the pollutants being emitted from this facility are PM (particulate matter) and PM_{10} (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and location of this facility and the extent of the proposed modifications. This facility is located in Wayne County, WV, which currently has a status of non-attainment for $PM_{2.5}$ (particulate matter less than 2.5 microns in diameter). However, in accordance with 45CSR19, this facility will continue to be a minor source.

However, a PM_{10} ambient air monitoring station will be required to be installed, operated and maintained and samples taken on the national one-in-six day sampling schedule, which is one 24-hour sample every sixth day. Sampling shall be conducted in accordance with Section 4.2.2 of permit R13-2202E.

MONITORING OF OPERATIONS

The coal handling equipment and storage areas should be observed to make sure that the facility is meeting the applicable visible emission standards. In accordance with 45CSR5 and 40 CFR 60.254(a), all emissions from coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified on or before April 28, 2008 should be less than 20% opacity. In accordance with 40 CFR 60.254(b), all emissions from coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008 should be less than 10% opacity.

The company has proposed that all transfer points will be at least fully enclosed or partially enclosed with water sprays. Rainbird type water sprays will be fixed at the top of each of the stacking tubes for stockpiles OS-1 through OS-9. A water truck with pressurized spray nozzles will be operated on a regular basis, depending on weather conditions and the operating schedule for the facility. In addition to the water truck, a street sweeper will be used to control fugitive emissions from the paved and unpaved haulroads and plant grounds.

The company shall maintain certified monthly and annual records of the combined amount of coal, coal-based synfuel and miscellaneous materials received by and shipped from the facility by barge, rail car, and truck. The company shall also maintain certified monthly and annual records of the amount of coke, coke breeze, magnetite, sand, gravel, and highway salt received by and shipped from the facility. In addition, the company shall maintain a certified monthly record of the amount of water passing through the water meter on the intake side of the water system and the usage of the street sweeper and water truck. Also, the facility shall perform visible emission checks and opacity readings as specified.

Example forms are given as Attachments A thru H to Permit R13-2202E. The Certification Of Data Accuracy statement shall be completed within fifteen (15) days of the end of the reporting period. These certified records shall be maintained on site for a period not less than five (5) years and be made available to the Director or his or her duly authorized representative upon request.

CHANGES TO CURRENT PERMIT R13-2202D

- Delete previously permitted, but not constructed, belt conveyors BC-02, BC-03, BC-27 and BC-28 and coal silos BS-03, BS-04 and BS-05
- Add a bin, two conveyors, a crusher and an open stockpile from the dismantled Synfuel Plant No. 1 previously permitted under R13-2366B will be added to this permit as BS-12, BC-30

and BC-31, CR-01 and OS-15, respectively

- Change the inputs for the calculation of emissions from paved haulroads for the trucking of miscellaneous materials and loaders working stockpiles
- Increase the maximum hourly throughput for the existing small miscellaneous materials barge off-load from 114 TPH to 500 TPH
- Construct six additional belt conveyors BC-32 thru BC-37 and an additional clean coal and miscellaneous materials stockpile area OS-14 to be located adjacent to the existing barge off-load system
- Decrease the maximum throughputs of transfer point TP-22 from 1,400 TPH and 12,264,000 TPY to 700 TPH and 6,132,000 TPY
- Decrease the maximum throughputs of transfer points TP-23, TP-24 and TP-25 from 1,500 TPH and 12,264,000 TPY to 700 TPH and 6,132,000 TPY

RECOMMENDATION TO DIRECTOR

The information contained in this permit application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. Therefore, the granting of a permit to Kanawha River Terminals, LLC for the modification of their existing coal preparation plant and loadout facility located in Ceredo, Wayne County, WV is hereby recommended.

Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

April 13, 2010

Date